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Welcome to STN International
NEWS
                 Web Page for STN Seminar Schedule - N. America
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         MAY 01
                New CAS web site launched
NEWS
         MAY 08
                 CA/CAplus Indian patent publication number format defined
NEWS
         MAY 14
                RDISCLOSURE on STN Easy enhanced with new search and display
                 fields
NEWS
        MAY 21
                BIOSIS reloaded and enhanced with archival data
        MAY 21
NEWS 6
                 TOXCENTER enhanced with BIOSIS reload
        MAY 21
NEWS
    7
                 CA/CAplus enhanced with additional kind codes for German
                 patents
NEWS 8
         MAY 22
                CA/CAplus enhanced with IPC reclassification in Japanese
                 patents
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     9
         JUN 27
                 CA/CAplus enhanced with pre-1967 CAS Registry Numbers
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        JUN 29
                 STN Viewer now available
NEWS 11
        JUN 29
                STN Express, Version 8.2, now available
NEWS 12
        JUL 02
                LEMBASE coverage updated
NEWS 13
        JUL 02
                LMEDLINE coverage updated
NEWS 14 JUL 02
                SCISEARCH enhanced with complete author names
NEWS 15 JUL 02 CHEMCATS accession numbers revised
NEWS 16 JUL 02
                CA/CAplus enhanced with utility model patents from China
NEWS 17
        JUL 16
                CAplus enhanced with French and German abstracts
NEWS 18
        JUL 18
                CA/CAplus patent coverage enhanced
NEWS 19
         JUL 26
                USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS 20
        JUL 30
                USGENE now available on STN
NEWS 21 AUG 06
                CAS REGISTRY enhanced with new experimental property tags
NEWS 22 AUG 06
                BEILSTEIN updated with new compounds
NEWS 23
        AUG 06
                FSTA enhanced with new thesaurus edition
NEWS 24 AUG 13
                CA/CAplus enhanced with additional kind codes for granted
                 patents
NEWS 25
        AUG 20
                CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,
              CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.
NEWS HOURS
              STN Operating Hours Plus Help Desk Availability
NEWS LOGIN
              Welcome Banner and News Items
NEWS IPC8
              For general information regarding STN implementation of IPC 8
```

Enter NEWS followed by the item number or name to see news on that specific topic.

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* STN Columbus

FILE 'HOME' ENTERED AT 11:23:35 ON 25 AUG 2007

=> file reg COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 11:23:45 ON 25 AUG 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 24 AUG 2007 HIGHEST RN 945591-52-6 DICTIONARY FILE UPDATES: 24 AUG 2007 HIGHEST RN 945591-52-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>

Uploading C:\Program Files\Stnexp\Queries\10-520,754.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss sam

SAMPLE SEARCH INITIATED 11:27:37 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 16 TO ITERATE

100.0% PROCESSED

16 ITERATIONS

5 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:

ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS:

80 TO 560

PROJECTED ANSWERS:

5 TO 234

L2 5 SEA SSS SAM L1

=> d scan

L2 5 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(2-hydroxy-4-methylphenyl)1-piperidinyl]butyl]- (9CI)

MF C30 H33 N3 O2

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 5 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-2',4'-dichloro- (9CI)

MF C34 H39 Cl2 N3 O3

$$H_2N = CH_2 = 0$$
 $N = (CH_2)_4 = NH = C1$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 5 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[2,5-dimethyl-4-(2pyridinylmethoxy)phenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI)

MF C37 H40 F3 N3 O2

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 5 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN [1,1'-Biphenyl]-4-carboxamide, N-methyl-N-[3-oxo-3-[4-(1-oxobutyl)-4phenyl-1-piperidinyl]propyl]- (9CI)

MF C32 H36 N2 O3

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 5 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN [1,1'-Biphenyl]-4-carboxamide, 2',4'-dichloro-N-[4-[4-[5,6,7,8-tetrahydro1-[2-[(tetrahydro-2H-pyran-2-yl)oxy]ethoxy]-2-naphthalenyl]-1piperidinyl]butyl]- (9CI)

MF C39 H48 Cl2 N2 O4

$$CH_2$$
 CH_2
 CH_2

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> 1

1 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s ll sss full

FULL SEARCH INITIATED 11:33:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 282 TO ITERATE

100.0% PROCESSED

282 ITERATIONS

99 ANSWERS

SEARCH TIME: 00.00.01

L3

99 SEA SSS FUL L1

=> 1 12 sss full

L IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

179.75 179.96

FILE 'CAPLUS' ENTERED AT 11:34:25 ON 25 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 25 Aug 2007 VOL 147 ISS 10 FILE LAST UPDATED: 24 Aug 2007 (20070824/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/infopolicy.html

=> d ibib abs hitstr 1YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

'HITSTR' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN

SAM - Index Name, MF, and structure - no RN FIDE - All substance data, except sequence data

IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data

SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used

SQD - Protein sequence data, includes RN

SQD3 - Same as SQD, but 3-letter amino acid codes are used

SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties EPROP - Table of experimental properties

PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract

APPS -- Application and Priority Information

BIB -- CA Accession Number, plus Bibliographic Data

CAN -- CA Accession Number

CBIB -- CA Accession Number, plus Bibliographic Data (compressed)

IND -- Index Data

IPC -- International Patent Classification

PATS -- PI, SO

STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels IBIB -- BIB, indented, with text labels

ISTD -- STD format, indented '

OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields. HELP FORMATS -- To see detailed descriptions of the predefined formats. ENTER DISPLAY FORMAT (IDE):end

=> s'13

L4 15 L3

=> d ibib abs hitstr 1YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y

L4 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2006:76664 CAPLUS Full-text

DOCUMENT NUMBER: 144:171017

TITLE: Preparation of 4-heterocyclylbutanamide derivatives as

modulators of alpha 7 nicotinic acetylcholine

receptors

INVENTOR(S): Gaviraghi, Giovanni; Ghiron, Chiara; Bothmann,

Hendrick; Roncarati, Renza; Terstappenn, Georg

Christian

PATENT ASSIGNEE(S):

Siena Biotech S.p.A., Italy

SOURCE:

PCT Int. Appl., 98 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| P. | ATENT | NO. | | | KIND DATE | | | | APPL | ICAT | ION 1 | NO. | DATE | | | | | | |
|----------------|-----------------------|------|-----|-----|-----------|----------------|------|------|-----------------|------|------------|------|------|-----|-----|-------|-----|--|--|
| | 0 2006 0 2006 | | | | | | 2006 | - | | WO 2 | 005- | EP78 | 46 | | 2 | 0050 | 719 | | |
| | | | | | | | AU, | | BA. | BB. | BG. | BR. | BW. | BY | BZ. | CA. | CH. | | |
| | | | | | | | DE, | | | | | | | | | | | | |
| | | | | | | | ID, | | | | | | | | | | | | |
| | | | - | | • | | LU, | • | • | • | • | • | • | • | • | • | • | | |
| | | | - | _ | • | | PG, | | • | • | • | • | • | • | • | | | | |
| | | | | | - | | TN, | - | | | | | - | • | | | | | |
| | | | ZM, | | , | _,, | , | , | , | , | , | ••, | 00, | | , | , | 10, | | |
| | RW: | • | • | | CH. | CY. | CZ, | DE. | DK. | EE. | ES. | FI. | FR. | GB. | GR. | HU. | TE. | | |
| • | | | | | | | MC, | | | | • | | | • | • | | • | | |
| | | | | | | | GN, | | | | | | | | | | | | |
| | | | | | | | NA, | | | | | | | | | | | | |
| | | | KZ, | | | | | , | , | , | , | , | , | , | , | , | , | | |
| A ^r | U 2005 | | • | • | • | | 2006 | 0126 | | AU 2 | 005-: | 2635 | 92 | | 2 | 0050' | 719 | | |
| C. | A 2574 | 237 | | | A1 | | 2006 | | | | | | | | | 0050 | | | |
| E | P 1778 | 658 | | | A2 | | 2007 | 0502 | | EP 2 | 005- | 7641 | 48 | | 2 | 0050 | 719 | | |
| | R: | AT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | EE, | ES. | FI, | FR. | GB. | GR. | HU. | IE. | | |
| | | | | | | | LV, | | | | | | | | | | | | |
| | | | HR, | | | · | | • | • | • | • | • | • | • | • | | | | |
| C | N 1010 | 1877 | 4 | • | Α | | 2007 | 0815 | | CN 2 | 005- | 8003 | 0521 | | 2 | 0050 | 719 | | |
| N | NO 2007000347 | | | | | | 2007 | 0118 | : | NO 2 | 007- | 347 | | | | 0070 | | | |
| I | IN 2007KN00222 | | | | | - | | | | | | | | | | | | | |
| | RIORITY APPLN. INFO.: | | | | | 2007.0025 | | | US 2004-589003P | | | | | | | | | | |
| | | | | | | WO 2005-EP7846 | | | | | W 20050719 | | | | | | | | |
| OTHER | COIMAR | 1/01 | | | 343 D | n | 444 | | · · · - · · · | | | | | | | | | | |

OTHER SOURCE(S): MARPAT 144:171017

The title amides with the general formula of R-Q-Y-(CH2)4-X [wherein R = H, OH, CN, NO2, halo, (un)substituted alkyl, (hetero)aryl, etc.; Q = 5-10 membered (hetero)aromatic ring; Y = CONH, SO2NH, OCONH, NHCO2, NHCONH, NHSO2NH, etc.; X = (un)substituted pyrrolidinyl, piperidinyl, morpholinyl, piperazinyl, etc.], or salts, isomers, diastereomers, or racemic mixts. thereof were prepared as modulators of α 7 nicotinic acetylcholine receptors (nAChR). For example, N-[4-[4-(2,4-dimethoxy-phenyl)-piperazin-1-yl]-butyl]-4-(pyridin-2-yl)-benzamide was prepared in a multi-step synthesis. The title compds. showed biol. activity with the IC50 between 10 nM and 30 μ M against α 7 nAChR in rat. The compds. are useful for treatment of diseases, conditions, or dysfunctions involving the α 7 nAChR, such as Alzheimer's disease, schizophrenia, neurol., psychiatric, cognitive, immunol., and inflammatory disorders (no data).

IT 874449-43-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of 4-heterocyclylbutanamide derivs. as modulators of $\alpha 7$ nAChR)

RN 874449-43-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 2'-chloro-N-[4-(4-hydroxy-4-phenyl-1piperidinyl)butyl]-, monohydrochloride (9CI) (CA INDEX NAME)

HCl

Ļ4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2004:740300 CAPLUS Full-text

DOCUMENT NUMBER:

141:265971

TITLE:

Preparation of piperidines as LXR receptor ligands for

pharmaceuticals and cosmetics

INVENTOR (S):

Diaz, Philippe; Bernardon, Jean-michel; Thoreau,

Etienne

PATENT ASSIGNEE(S):

Galderma Research & Development, S.N.C., Fr.

SOURCE:

PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| | PATENT NO. | | | | | KIND DATE | | | APPLICATION NO. | | | | | | | | | |
|-------|-----------------------|------|-------|-----|-----|------------------|-----|------|-----------------|------|-------|-------|------|-----|------|-------|------|-----|
| | WO | 2004 | 0764: | 18 | | | | | | | | | | | | 2 | 0040 | 219 |
| | | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BW, | BY, | ΒZ, | CA, | CH, |
| | | | | | | CU, | | | | | | | | | | | | |
| | | | | | | HR, | | | | | | | | | | | | |
| | | | | | | LT, | | | | | | | | | | | | |
| | | RW: | BW, | | | | | | | | | | | | | | | |
| | | | | | | CZ, | | | | | | | | | | | | |
| | | | | | | RO, | | | | | | | | | | | | |
| | | | | | | MR, | | | | | | | | · | • | • | · | · |
| | FR | 2851 | 769 | | | A1 | | 2004 | 0903 | | FR 2 | 003- | 2478 | | | . 20 | 0030 | 228 |
| | FR | 2851 | 769 | | | B1 | | 2006 | 0623 | | | | | | | | | |
| | CA | 2512 | 886 | | | A1 | | 2004 | 0910 | | CA 2 | 004- | 2512 | 886 | | 20 | 0040 | 219 |
| | EР | 1599 | 447 | | | A1 | | 2005 | 1130 | | EP 2 | 004- | 7125 | 64 | | 20 | 0040 | 219 |
| | | R: | AT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR, | IT, | LI, | LU, | NL, | SE, | MC, | PT, |
| | | | | | | LV, | | | | | | | | | | | | · |
| | US | 2006 | 0583 | 51 | | A1 | | 2006 | 0316 | .1 | US 2 | 005- | 2127 | 14 | | 2 | 0050 | 329 |
| PRIOR | RIORITY APPLN. INFO.: | | | . : | | | | | : | FR 2 | 003-2 | 2478 | | . 1 | A 20 | 00302 | 228 | |
| | | | | | | | | | | | | | | J | | | | |
| | · | | | | | | | | | 1 | WO 2 | 004-1 | EP23 | 96 | V | v 20 | 0040 | 219 |
| OTHER | THER SOURCE(S): | | | | | MARPAT 141:26593 | | | | | | | | | | | | |

GI

$$R^1$$
 N A R^2

AB Piperidines I [wherein R1 = ar/alkyl, hetero/aryl, aralkenyl, etc.; R2 = ar/alkyl, hetero/aryl; Ar = aralkyl, hetero/aryl; X = two H atoms, O, S; Y = O, S; A = (CH2)n; n = 0-1; their optical and geometrical isomers, and their salts] were prepared as LXR receptor ligands for pharmaceutical or cosmetic uses. Two synthetic examples, 10 formulations and 89 claimed compds. are given. For example, a tablet formulation contains piperidine (II) 0.001, starch 0.114, dicalcium phosphate 0.020, silica 0.020, lactose 0.030, talc 0.010, and Mg stearate 0.005 g.

II

TT 749246-31-9 749246-67-1 749246-70-6 749246-93-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of piperidines as LXR receptor ligands for pharmaceuticals and cosmetics)

RN 749246-31-9 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[2-(4-acetyl-4-phenyl-1-piperidinyl)-2-oxoethyl]-N-methyl- (9CI) (CA INDEX NAME)

RN 749246-67-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-methyl-N-[3-oxo-3-[4-(1-oxobutyl)-4-phenyl-1-piperidinyl]propyl]- (9CI) (CA INDEX NAME)

RN 749246-70-6 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[2-(4-acetyl-4-phenyl-1-piperidinyl)-2-

RN 749246-93-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[3-(4-acetyl-4-phenyl-1-piperidinyl)-3-oxopropyl]- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

5

ACCESSION NUMBER:

2004:719951 CAPLUS <u>Full-text</u> 141:248726

DOCUMENT NUMBER: TITLE:

Preparation of piperidines as LXR receptor ligands for

pharmaceuticals and cosmetics

INVENTOR(S):

Diaz, Philippe; Bernardon, Jean Michel; Thoreau,

Etienne

PATENT ASSIGNEE(S):

Galderma Research & Development, Fr.

SOURCE:

Fr. Demande, 34 pp. CODEN: FRXXBL

DOCUMENT TYPE:

Patent

LANGUAGE:

French

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| • | PATENT NO. | | | | | | | DATE | | | | | | | DATE | | | | | |
|-------|-----------------------|------|------|-----|-----|------------|------------|---------|------|-----------------|------|-----------|------|------|------|------------|-------|-----|--|--|
| | | | | | | | - ' | | | | | - | | | | - | | | | |
| | FR | 2851 | 769 | • | | A1 | | 2004 | 0903 | | FR 2 | 0 0 3 - 1 | 2478 | | | 2 | 0030 | 228 | | |
| | FR | 2851 | 769 | | | B1 | | 2006 | 0623 | | | | | | | | | | | |
| | CA | 2512 | 886 | | | A1 | , | 2004 | 0910 | | CA 2 | 004- | 2512 | 386 | | 20 | 0040 | 219 | | |
| | WO | 2004 | 0764 | 18 | | A1 | | 2004 | 0910 | | WO 2 | 004- | EP23 | 96 | | 20 | 0040 | 219 | | |
| | | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | ΑZ, | BA, | BB, | BG, | BR, | BW, | BY, | ΒZ, | CA, | CH, | | |
| | | | | | | | | | | | DZ, | | | | | | | | | |
| | | | | | | | | | | | IS, | | | | | | | | | |
| | | | LK, | LR, | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | ΜZ, | NA, | NI | | |
| | | RW: | BW, | GH, | GM, | ΚE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AT, | BE, | | |
| | | | BG, | CH, | CY, | CZ, | DE, | DK, | EE, | ES, | FI, | FR, | GB, | GR., | HU, | ΙE, | IT, | LU, | | |
| | | | MC, | NL, | PT, | RO, | SE, | SI, | SK, | TR, | BF, | ВJ, | CF, | CG, | CI, | CM, | GΑ, | GN, | | |
| | | | GQ, | GW, | ML, | MR, | NE, | SN, | TD, | TG | | | | | | | | | | |
| | EΡ | 1599 | 447 | | | A 1 | | 2005 | 1130 | • | EP 2 | 004- | 7125 | 54 | | 20 | 00402 | 219 | | |
| | | R: | AT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR, | IT, | LI, | LU, | NL, | SE, | MC, | PT, | | |
| | | | ΙE, | SI, | LT, | LV, | FI, | RO, | MK, | CY, | AL, | TR, | ВG, | CZ, | EE, | HU, | SK | | | |
| | US | 2006 | 0583 | 51 | | A1 | | 2006 | 0316 | | US 2 | 005- | 2127 | 14 | | 20 | 0050 | 829 | | |
| PRIOF | RIORITY APPLN. INFO.: | | | | | | | | | FR 2003-2478 | | | | | | | | | | |
| | • | | | | | | | | | US 2003-454345P | | | | | | P 20030314 | | | | |
| | | | | | | | | | | | WO 2 | 004- | EP23 | 96 | V | W 20040219 | | | | |

OTHER SOURCE(S):

MARPAT 141:248726

AB Piperidines as LXR receptor ligands are prepd. for pharmaceutical or cosmetic uses. A piperidine compound and used in tablet formulation containing the piperidine 0.001, starch 0.114, dicalcium phosphate 0.020, silica 0.020, lactose 0.030, talc 0.010, and Mg stearate 0.005 g.

IT 749246-31-9 749246-67-1 749246-70-6

749246-93-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of piperidines as LXR receptor ligands for pharmaceuticals and cosmetics)

RN 749246-31-9 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[2-(4-acetyl-4-phenyl-1-piperidinyl)-2-oxoethyl]-N-methyl- (9CI) (CA INDEX NAME)

$$Ac \xrightarrow{Ph} 0 \xrightarrow{Me} 0 \xrightarrow{Ph}$$

RN 749246-67-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-methyl-N-[3-oxo-3-[4-(1-oxobutyl)-4-phenyl-1-piperidinyl]propyl]- (9CI) (CA INDEX NAME)

RN 749246-70-6 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[2-(4-acetyl-4-phenyl-1-piperidinyl)-2-oxoethyl]- (9CI) (CA INDEX NAME)

RN 749246-93-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[3-(4-acetyl-4-phenyl-1-piperidinyl)-3-oxopropyl]- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:344622 CAPLUS Full-text

DOCUMENT NUMBER: 140:357212

TITLE: Preparation of substituted anilinic piperidines as MCH

selective antagonists

INVENTOR(S): Marzabadi, Mohammad R.; Wetzel, John; Deleon, John E.;

Jiang, Yu; Chen, Chien-An; Lu, Kai

PATENT ASSIGNEE(S):

Synaptic Pharmaceutical Corporation, USA

SOURCE:

U.S., 394 pp. CODEN: USXXAM

DOCUMENT TYPE:

Patent

English

LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|------------------------|-----------|----------|-----------------|-----------|----------|
| US 6727264 | B1 | 20040427 | US 2002-188434 | | 20020703 |
| US 2004073036 | A1 | 20040415 | US 2003-345063 | | 20030114 |
| US 2006041139 | A9 | 20060223 | | | |
| US 7105544 | B2 | 20060912 | | | |
| US 7067534 | B1 | 20060627 | US 2003-719358 | | 20031121 |
| US 2004186103 | A1 | 20040923 | US 2004-753057 | | 20040106 |
| US 2006084649 | A9 | 20060420 | • | | |
| US 7199135 | B2 | 20070403 | | | • • • |
| US 2006217418 | A1 | 20060928 | US 2005-541991 | | 20050705 |
| US 2007043080 | A1 | 20070222 | US 2005-214968 | | 20050830 |
| PRIORITY APPLN. INFO.: | | | US 2001-303091P | P | 20010705 |
| | | | US 2002-346997P | P | 20020109 |
| | | | US 2002-188434 | A2 | 20020703 |
| • | | | WO 2002-US21063 | A2 | 20020703 |
| | | | US 2003-345063 | A2 | 20030114 |
| | | | US 2003-719358 | A1 | 20031121 |
| · | | | WO 2004-US175 | W | 20040106 |
| OMITTED COTTE OF (O) | | | • | | |

OTHER SOURCE(S):

MARPAT 140:357212

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. [I (R1 = H, alkyl, aryl, etc.; R2 = alkyl, cyclopropyl; R3 = (un) substituted (hetero) aryl; A = H, F, Cl, Br, CN, etc.; X = O, NH; n = O-5), II (W = III, IV (wherein R1 = H, Me, Et; X = O, NR3, CO, a bond; Y = H, (hetero)aryl; R3 = H, (hetero)aryl); R2 and A as above)] which are selective antagonists for melanin concentrating hormone-1 (MCH1) receptors, were prepared Thus, reacting 2-methyl-N-[3-(4-piperidinyl)phenyl]propanamide (preparation given) with 4-chloro-3', 4'-dimethylbutyrophenone in the presence of K2CO3 and NaI in DMF afforded 80% V which showed Ki of 3.9 nM in cloned rat MCH1 binding assay.

487051-52-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(preparation of substituted anilinic piperidines as MCH selective antagonists)

RN 487051-52-5 CAPLUS

[1,1'-Biphenyl]-4-carboxamide, N-[(1S)-3-[4-[3-[(2-methyl-1-CN

oxopropyl)amino]phenyl]-1-piperidinyl]-1-phenylpropyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT:

THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2004:60507 CAPLUS Full-text

DOCUMENT NUMBER:

140:128279

TITLE:

Preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of

hypercholesterolemia

INVENTOR(S):

Bouillot, Anne Marie Jeanne; Dumaitre, Bernard Andre

PATENT ASSIGNEE(S):

Glaxo Group Limited, UK

SOURCE:

PCT Int. Appl., 46 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

GI

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATE | PATENT NO. | | | | | KIND DATE | | | APPLICATION NO. | | | | | | DATE | | | |
|------------------------|------------------|-------|-----|-----|-----------|-----------|------------------|------|-----------------|------|-------|------|-----|-----|------|------|-----|--|
| | | | | | | - | | | | | | | | | - | | | |
| WO 2 | 20040 | 074 | 93 | | A1 | | 2004 | 0122 | 1 | WO 2 | 003-1 | EP76 | 17 | | 2 | 0030 | 711 | |
| | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | ΑZ, | BA, | BB, | BG, | BR, | BY, | ΒZ, | CA, | CH, | CN, | |
| | | CO, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | |
| | | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | ΚE, | KG, | KP, | KR, | ΚZ, | LC, | LK, | LR, | |
| | | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NI, | NO, | NZ, | OM, | |
| | | PG, | PH, | PL, | PT, | RO, | RU, | SĊ, | SD, | SE, | SG, | SK, | SL, | SY, | TJ, | TM, | TN, | |
| | | TR, | TT, | TZ, | UA, | ŪG, | US, | UZ, | VC, | VN, | YU, | ZA, | ZM, | ZW | | | | |
| | RW: | GH, | GM, | ΚE, | LS, | MW, | ΜZ, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AM, | AZ, | BY, | |
| • | | KG, | ΚZ, | MD, | RU, | ТJ, | TM, | AT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | EE, | ES, | |
| | | FI, | FR, | GB, | GR, | HU, | ΙE, | IT, | LU, | MC, | NL, | PT, | RO, | SE, | SI, | SK, | TR, | |
| | | BF, | ВJ, | CF, | CG, | CI, | CM, | GA, | GN, | GQ, | GW, | ML, | MR, | NE, | SN, | TD, | TG | |
| AU 2 | 20032 | 24669 | 96 | | A1 | | 2004 | 0202 | 1 | AU 2 | 003- | 2466 | 96 | | 2 | 0030 | 711 | |
| PRIORITY APPLN. INFO.: | | | | | | | | | (| GB 2 | 002- | 1623 | 0 | | A 2 | 0020 | 712 | |
| | | | | | | | | | 1 | WO 2 | 003-1 | EP76 | 17 | 1 | W 2 | 0030 | 711 | |
| OTHER SOU | OTHER SOURCE(S): | | | | | | MARPAT 140:12827 | | | | | 279 | | | | | | |

$$Ar^1$$
 $N = E = X = Ar^2 = Ar^3$

II

The title compds. [I; Ar1 = Ph, naphthyl, Ph fused by cycloalkyl, etc.; Ar2 = AB Ph, 5-6 membered heteroaryl, bicyclic heteroaryl; Ar3 = Ph, naphthyl, Ph fused by cycloalkyl, etc.; E = alkylene; X = CONR2, NR2CO; R2 = alkyl, H] which upregulate LDL receptor (LDL-r) expression, were prepared More particularly, this invention relates to the compds. I wherein Arl is substituted by at least one R1 group selected from O(CRaRb)nC(O)NRxRy, O(CH2)nCN, O(CH2)nO(CH2)mOR2, O(CH2) nCO2R2, OSO2NRXRY, OSO2(CH2) pCH3, (CRaRb) nCONRXRY, (CH2) nCN, (CH2) nO (CH2) mOR2, (CH2) nCO2R2, (CH2) nCOR2, SO2NRxRy, SO2 (CH2) pCH3, CH:CHCONRxRy, CH:CHCN, CH:CHCO2R2, CO2R2, COR2, CONRxRy and alkenyl (wherein Rx, Ry = H, alkyl; Ra, Rb = H, alkyl, cycloalkyl, where Ra and Rb are not both cycloalkyl; n, m = 1-4; p = 0-4); and Ar2 is substituted by 1-4 groups independently selected from the group consisting of: (CH2) nOH and C02(CH2)pCH3. E.g., a multi-step synthesis of II which showed EC50 of 26 nM in the luciferase assay, was given. The pharmaceutical composition comprising the title compound I is claimed.

IT 648882-50-2P 648882-51-3P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of hypercholesterolemia)

RN 648882-50-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-chloro-2-(hydroxymethyl)- (9CI) (CA INDEX NAME)

$$H_2N$$
— C — CH_2 — O
 N — CH_2) 4 — NH — C

RN 648882-51-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-cyano-2-(hydroxymethyl)-(9CI) (CA INDEX NAME)

$$H_2N = CH_2 = 0$$
 $N = (CH_2)_4 = NH = 0$
 $HO = CH_2$
 CN

REFERENCE COUNT:

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2004:60313 CAPLUS Full-text

DOCUMENT NUMBER:

140:128277

TITLE:

Preparation of arylpiperidines and their use to reduce

elevated levels of LDL-cholesterol

INVENTOR (S):

Bouillot, Anne Marie Jeanne; Dumaitre, Bernard Andre

PATENT ASSIGNEE(S):

Glaxo Group Limited, UK

SOURCE:

PCT Int. Appl., 52 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT | PATENT NO. | | | | | | KIND DATE | | | | APPLICATION NO. | | | | | | | | |
|--------------|------------------|-----|-----|-----|--------------|------|------------------|------|------|------|-----------------|-----|-----|------|-------|---------|--|--|--|
| . WO 200 | 40069 | 24 | | A1 | - | 2004 | 0122 | | | | | | | 20 | 0030 | 711 | | | |
| W : | ΑE, | AG, | AL, | AM, | AT, | AU, | ΑZ, | BA, | BB, | BG, | BR, | BY, | ΒZ, | CA, | CH, | CN, | | | |
| | CO, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | | | |
| | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | ΚP, | KR, | ΚZ, | LC, | LK, | LR, | | | |
| | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NI, | NO, | NZ, | ·OM, | | | |
| | PG, | PH, | PL, | PT, | RO, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SY, | ТJ, | TM, | TN, | | | |
| | TR, | TT, | TZ, | UA, | UG, | US, | UZ, | VC, | VN, | ΥU, | ZA, | ZM, | ZW | | | | | | |
| RV | 1: GH, | GM, | KE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | ŪĠ, | ZM, | ZW, | AM, | AZ, | BY, | | | |
| | KG, | KZ, | MD, | RU, | TJ, | TM, | ΑT, | ΒE, | BG, | CH, | CY, | CZ, | DE, | DK, | EE, | ES, | | | |
| | FI, | FR, | GB, | GR, | HU, | ΙE, | IT, | LU, | MC, | NL, | PT, | RO, | SE, | SI, | SK, | TR, | | | |
| | BF, | ВJ, | CF, | CG, | CI, | CM, | GA, | GN, | GQ, | GW, | ML, | MR, | NE, | SN, | TD, | TG | | | |
| AU 200 | 32574 | 60 | | A1 | | 2004 | 0202 | | AU 2 | 003- | 2574 | 60 | | 20 | 0030' | 711 | | | |
| EP 153 | 4280 | | | A1 | | 2005 | 0601 | | EP 2 | 003- | 7638 | 48 | | . 20 | 0030 | 711 | | | |
| R: | AT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR, | IT, | LI, | LU, | NL, | SE, | MC, | PT, | | | |
| | ΙE, | SI, | LT, | LV, | FI, | RO, | MK, | CY, | AL, | TR, | BG, | CZ, | EE, | HU, | SK | | | | |
| US 200 | 61224 | 32 | | A1 | | 2006 | 0608 | 1 | US 2 | 005- | 5207 | 54 | | 20 | 0050 | 110 | | | |
| PRIORITY AF | . : | | | | | (| GB 2 | 002- | 1623 | 3 | A 20020712 | | | | | | | | |
| | | | | | | | | | | | WO 2003-EP7615 | | | | | 711 | | | |
| OTHER SOURCE | OTHER SOURCE(S): | | | | | | MARPAT 140:12827 | | | | | | | | | | | | |

GI

$$Ar^1$$
 $N = E = X = Ar^2 = Ar^3$

AB The title compds. [I; Ar1 = (un) substituted Ph, naphthyl, Ph fused by cycloalkyl, etc.; Ar2 = (un) substituted Ph, 5-6 membered heteroaryl, bicyclic heteroaryl; Ar3 = (un) substituted Ph, naphthyl, Ph fused by cycloalkyl, etc.; E = alkylene, X = CONR2, NR2CO; R2 = H, alkyl] which up-regulate LDL receptor (LDL-r) expression, were prepared E.g., a multi-step synthesis of II, was given. All exemplified compds. I induced luciferase activity having EC50 values in the range 1 nM to 64 nM in in vitro assay. The pharmaceutical composition comprising the compound I is claimed.

II

IT 648888-36-2P 648888-38-4P 648888-42-0P 648888-45-3P 648888-55-5P 648888-59-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of arylpiperidines for reducing elevated levels of LDL-cholesterol)

RN 648888-36-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[4-ethyl-2-(2-hydroxyethoxy)phenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

HC1

RN 648888-38-4 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[4-ethyl-2-(2-hydroxyethoxy)phenyl]-1-piperidinyl]butyl]-, monohydrochloride (9CI) (CAINDEX NAME)

HC1

RN 648888-42-0 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-ethoxyethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 648888-45-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[5,6,7,8-tetrahydro-1-(2-hydroxyethoxy)-2-naphthalenyl]-1-piperidinyl]butyl]-, monohydrochloride (9CI) (CA INDEX NAME)

HC1

RN 648888-53-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 2',4'-dichloro-N-[4-[4-[5,6,7,8-tetrahydro-1-(2-hydroxyethoxy)-2-naphthalenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648888-55-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-chloro-N-[4-[4-[5,6,7,8-tetrahydro-1-(2-hydroxyethoxy)-2-naphthalenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

H0-CH₂-CH₂-O N-(CH₂)₄-NH-
$$\stackrel{\circ}{\text{U}}$$

RN 648888-59-9 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-[(methylsulfonyl)amino]-N-[4-[4-[5,6,7,8-tetrahydro-1-(2-hydroxyethoxy)-2-naphthalenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

IT 648888-69-1P 648888-71-5P 648888-87-3P

648888-97-5P 648889-00-3P 648889-11-6P

648889-13-8P 648889-23-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of arylpiperidines for reducing elevated levels of LDL-cholesterol)

RN 648888-69-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[4-ethyl-2-[2-[(tetrahydro-2H-pyran-2-yl)oxy]ethoxy]phenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 648888-71-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[4-ethyl-2-[2-[(tetrahydro-

2H-pyran-2-yl)oxy]ethoxy]phenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648888-87-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[5,6,7,8-tetrahydro-1-[2-[(tetrahydro-2H-pyran-2-yl)oxy]ethoxy]-2-naphthalenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648888-97-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[5,6,7,8-tetrahydro-1-(phenylmethoxy)-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 648889-00-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 648889-11-6 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 2',4'-dichloro-N-[4-[4-[5,6,7,8-tetrahydro-1-[2-[(tetrahydro-2H-pyran-2-yl)oxy]ethoxy]-2-naphthalenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648889-13-8 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-chloro-N-[4-[4-[5,6,7,8-tetrahydro-1-[2-[(tetrahydro-2H-pyran-2-yl)oxy]ethoxy]-2-naphthalenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648889-23-0 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-[(methylsulfonyl)amino]-N-[4-[4-[5,6,7,8-tetrahydro-1-[2-[(tetrahydro-2H-pyran-2-yl)oxy]ethoxy]-2-naphthalenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN 2004:60312 CAPLUS Full-text

ACCESSION NUMBER: DOCUMENT NUMBER:

140:128276

TITLE:

Preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of

hypercholesterolemia

INVENTOR(S):

Bouillot, Anne Marie Jeanne; Dumaitre, Bernard Andre

PATENT ASSIGNEE(S):

Glaxo Group Limited, UK PCT Int. Appl., 74 pp.

SOURCE: CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PAT | PATENT NO. | | | | | | KIND DATE | | | APPLICATION NO. | | | | | DATE | | | |
|------------------------|------------------|-------|-----|-----|-----------|-----|-----------|-------|------|-----------------|-------|-------|------|-----|------|------|-----|--|
| | | | | | | - | | | | | | | | | _ | | | |
| WO | 2004 | 00692 | 23 | | A1 | | 2004 | 0122 | Ţ | WO 2 | 003-1 | EP76 | 13 | | 2 | 0030 | 711 | |
| | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | ΑZ, | BA, | BB, | BG, | BR, | BY, | BZ, | CA, | CH, | CN, | |
| | | CO, | CR, | CU, | CZ, | DΕ, | DK, | DM, | DZ, | EC, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | |
| | | GM, | HR, | HU, | ID, | ĮL, | IN, | IS, | JP, | KE, | KG, | ΚP, | KR, | ΚZ, | LC, | LK, | LR, | |
| | | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NI, | NO, | NZ, | OM, | |
| | | PG, | PH, | PL, | PT, | RO, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SY, | TJ, | TM, | TN, | |
| | | TR, | TT, | TZ, | UA, | ŪĠ, | US, | UZ, | VC, | VN, | ΥU, | ZA, | ZM, | ZW | | | | |
| | RW: | GH, | GM, | KE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AM, | AZ, | BY, | |
| | | KG, | KZ, | MD, | RU, | ТJ, | TM, | ΑT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | EE, | ES, | |
| | | FI, | FR, | GB, | GR, | ΗU, | IE, | IT, | LU, | MC, | NL, | PT, | RO, | SE, | SI, | SK, | TR, | |
| | | BF, | ВJ, | CF, | CG, | CI, | CM, | GA, | GN, | GQ, | GW, | ML, | MR, | NE, | SN, | TD, | TG | |
| AU | AU 2003250058 | | | | | | 2004 | 0202 | 7 | AU 2 | 003-2 | 2500 | 58 | | 20 | 030 | 711 | |
| PRIORITY APPLN. INFO.: | | | | | | | | | (| GB 2 | 002- | 16252 | 2 | . 1 | A 20 | 0020 | 712 | |
| | | | | | | Ţ | WO 2 | 003-1 | EP76 | 13 | Ţ | W 20 | 0030 | 711 | | | | |
| OTHER SO | OTHER SOURCE(S): | | | | | | 140: | 76 | | | | | | | | | | |

GI

$$Ar^1 \longrightarrow N = E = X = Ar^2 = Ar^3$$

ΙI

The title compds. [I; Ar1 = (un) substituted Ph, naphthyl, Ph fused by AB cycloalkyl, etc.; Ar2 = (un) substituted Ph, 5-6 membered heteroaryl, bicyclic heteroaryl; Ar3 = (un)substituted Ph, naphthyl, Ph fused by cycloalkyl, etc.; E = alkylene; X = CONR2, NR2CO; R2 = alkyl, H] which up-regulate LDL receptor (LDL-r) expression, were prepared More particularly, this invention relates to the compds. I wherein Arl is substituted by at least one R1 group selected from O(CRaRb)nC(O)NRxRy, O(CH2)nCN, O(CH2)nO(CH2)mOR2, O(CH2)nCO2R2, OSO2NRxRy, OSO2(CH2)pCH3, (CRaRb)nCONRxRy, (CH2)nCN, (CH2)nO(CH2)mOR2, (CH2)nCO2R2, (CH2)nCOR2, SO2NRXRY, SO2(CH2)pCH3, CH:CHCONRXRY, CH:CHCN, CH:CHCO2R2, CO2R2, COR2, CONRxRy and alkenyl (wherein Rx, Ry = H, alkyl; Ra, Rb = H, alkyl, cycloalkyl, where Ra and Rb are not both cycloalkyl; n, m = 1-4; p = 0-4); and Ar2 is substituted by 1-4 groups independently selected from the group consisting of: (CH2)nOH and CO2(CH2)pCH3. E.g., a multi-step synthesis of II, was given. All exemplified compds. I induced luciferase activity having EC50 values in the range 1 nM to 800 nM. The pharmaceutical composition comprising the title compound I is claimed.

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of hypercholesterolemia)

RN 648897-48-7 CAPLUS

648897-48-7P 648897-53-4P

CN Acetic acid, [[5,6,7,8-tetrahydro-2-[1-[4-[[[4'-(trifluoromethyl)[1,1'-biphenyl]-4-yl]carbonyl]amino]butyl]-4-piperidinyl]-1-naphthalenyl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

RN 648897-53-4 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-chloro- (9CI) (CA INDEX NAME)

$$H_2N = C - CH_2 - O$$
 $N = (CH_2)_4 - NH = C$
 $C1$

IT 648897-41-0P 648897-42-1P 648897-43-2P 648897-44-3P 648897-49-8P 648897-50-1P 648897-51-2P 648897-52-3P 648897-54-5P 648897-55-6P 648897-59-0P 648897-60-3P 648897-61-4P 648897-65-8P 648897-68-1P 648897-77-2P 648897-80-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of hypercholesterolemia)

RN 648897-41-0 CAPLUS

CN, [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 648897-42-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(cyanomethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 648897-43-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[5,6,7,8-tetrahydro-1-[2-(2-methoxyethoxy)ethoxy]-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

PAGE 1-B

RN 648897-44-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[5,6,7,8-tetrahydro-1-[2-(2-hydroxyethoxy)ethoxy]-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

RN 648897-49-8 CAPLUS

CN Acetic acid, [[5,6,7,8-tetrahydro-2-[1-[4-[[[4'-(trifluoromethyl)[1,1'-biphenyl]-4-yl]carbonyl]amino]butyl]-4-piperidinyl]-1-naphthalenyl]oxy]-, monohydrochloride (9CI) (CA INDEX NAME)

$$HO_2C-CH_2-O$$
 $N-(CH_2)_4-NH-C$
 CF_3

RN 648897-50-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-cyano- (9CI) (CA INDEX NAME)

RN 648897-51-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[4-(2-amino-2-oxoethoxy)-2,5-dimethylphenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 648897-52-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[2,5-dimethyl-4-[(methylsulfonyl)oxy]phenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 648897-54-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-2',4'-dichloro- (9CI) (CA INDEX NAME)

$$H_2N$$
— C — CH_2 — O
 N — CH_2) 4 — NH — C
 $C1$

RN 648897-55-6 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[5,6,7,8-tetrahydro-1-[2-(methylamino)-2-oxoethoxy]-2-naphthalenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

$$MeNH = C - CH_2 - O \qquad N = (CH_2)_4 - NH = C$$

RN 648897-59-0 CAPLUS

CN Sulfamic acid, 2-[1-[4-[(4'-cyano[1,1'-biphenyl]-4-yl)carbonyl]amino]butyl]-4-piperidinyl]-5,6,7,8-tetrahydro-1-naphthalenyl ester (9CI) (CA INDEX NAME)

RN 648897-60-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-[(methylsulfonyl)amino]-(9CI) (CA INDEX NAME)

RN 648897-61-4 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-chloro-2-hydroxy- (9CI)

$$H_2N = C + CH_2 - O$$
 $N = (CH_2)_4 = NH = C$
 OH
 $C1$

RN 648897-65-8 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-1-methyl-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-cyano- (9CI) (CA INDEX NAME)

RN 648897-68-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-1,1-dimethyl-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-cyano-(9CI) (CA INDEX NAME)

RN 648897-69-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-1,1-dimethyl-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-chloro-(9CI) (CA INDEX NAME)

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-amino-1-methyl-2-oxoethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-chloro- (9CI) (CA INDEX NAME)

$$H_2N-C-CH-O$$
 $N-CCH_2$
 $A-NH-C$
 $C1$

RN 648897-76-1 CAPLUS

CN Acetic acid, [[2-[1-[4-[[(4'-chloro[1,1'-biphenyl]-4-yl)carbonyl]amino]butyl]-4-piperidinyl]-5,6,7,8-tetrahydro-1-naphthalenyl]oxy]- (9CI) (CA INDEX NAME)

RN 648897-77-2 CAPLUS

CN Acetic acid, [[2-[1-[4-[[(4'-cyano[1,1'-biphenyl]-4-yl)carbonyl]amino]butyl]-4-piperidinyl]-5,6,7,8-tetrahydro-1-naphthalenyl]oxy]- (9CI) (CA INDEX NAME)

RN 648897-80-7 CAPLUS

CN 2-Pyrrolidinecarboxamide, 1-[[[2-[1-[4-[[(4'-cyano[1,1'-biphenyl]-4-yl)carbonyl]amino]butyl]-4-piperidinyl]-5,6,7,8-tetrahydro-1-naphthalenyl]oxy]acetyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

IT 443130-75-4P 443130-79-8P 648888-97-5P

648889-00-3P 648897-93-2P 648897-94-3P

648897-95-4P 648897-96-5P 648898-19-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of hypercholesterolemia)

RN 443130-75-4 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-79-8 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648888-97-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[5,6,7,8-tetrahydro-1-(phenylmethoxy)-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 648889-00-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 648897-93-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-chloro-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648897-94-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-chloro-N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648897-95-4 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 2',4'-dichloro-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648897-96-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 2',4'-dichloro-N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 648898-19-5 CAPLUS

CN Acetic acid, [[2-[1-[4-[[(4'-cyano[1,1'-biphenyl]-4-yl)carbonyl]amino]butyl]-4-piperidinyl]-5,6,7,8-tetrahydro-1-naphthalenyl]oxy]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2004:60311 CAPLUS Full-text

DOCUMENT NUMBER:

140:128275

TITLE:

Preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of

hypercholesterolemia

INVENTOR (S):

Bouillot, Anne Marie Jeanne; Dumaitre, Bernard Andre

PATENT ASSIGNEE(S):

Glaxo Group Limited, UK

SOURCE:

PCT Int. Appl., 88 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

---3

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| | | | | |
| WO 2004006922 | A1 | 20040122 | WO 2003-EP7612 | 20030711 |

AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2003246694 A1 20040202 AU 2003-246694 20030711 EP 1539158 EP 2003-763846 Αl 20050615 20030711 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK US 2006052384 A1 20060309 US 2005-520799 20050110 PRIORITY APPLN. INFO.: GB 2002-16224 20020712 WO 2003-EP7612 20030711

OTHER SOURCE(S):

MARPAT 140:128275

GI

AB The title compds. [I; Arl = (un) substituted Ph, naphthyl, Ph fused by cycloalkyl, etc.; Ar2 = (un)substituted Ph, 5-6 membered heteroaryl, bicyclic heteroaryl; Ar3 = (un)substituted Ph, naphthyl, Ph fused by cycloalkyl, etc.; E = alkylene; X = CONRa, NRaCO; Ra = alkyl, H] which up-regulate LDL receptor (LDL-r) expression, were prepared E.g., a multi-step synthesis of II, was given. All exemplified compds. I induced luciferase activity having EC50 values in the range 1 nM to 300 nM. The pharmaceutical composition comprising the title compound I is claimed.

IT 649557-04-0P

> RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of hypercholesterolemia)

RN649557-04-0 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-chloro-2-hydroxy-N-[4-[4-(5,6,7,8tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) INDEX NAME)

IT 649556-87-6P 649556-96-7P 649556-97-8P 649556-98-9P 649557-01-7P 649557-03-9P 649557-05-1P 649557-07-3P 649557-08-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of hypercholesterolemia)

RN 649556-87-6 CAPLUS

CN [1,1'-Biphenyl]-2-carboxylic acid, 4-[[[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]amino]carbonyl]-4'-(trifluoromethyl)-, methyl ester (9CI) (CA INDEX NAME)

RN 649556-96-7 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-[(methylsulfonyl)amino]-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 649556-97-8 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-chloro-2-[(dimethylamino)methyl]-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 649556-98-9 CAPLUS

CN [1,1'-Biphenyl]-4,4'-dicarboxamide, N,N-dimethyl-N'-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

OMe
$$N = (CH_2)_4 - NH = U$$

RN 649557-01-7 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]-4'-[[(2,2,2-trifluoroethyl)sulfonyl]amino]- (9CI) (CA INDEX NAME)

OME N— (CH₂) 4—NH—
$$\stackrel{\circ}{\mathbb{Q}}$$
 — CH₂—CF₃

RN 649557-03-9 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-[[(1-methylethyl)sulfonyl]amino]-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]-4'-(trifluoroacetyl)- (9CI) (CA INDEX NAME)

RN 649557-07-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 2-(2-amino-2-oxoethoxy)-4'-chloro-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 649557-08-4 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]-4'-[(trifluoroacetyl)amino]- (9CI) (CA INDEX NAME)

OME N— (CH₂)
$$_4$$
 NH— $_0$ NH— $_0$ CF₃

IT 649557-60-8P 649557-61-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of arylpiperidines as inducers of LDL-receptor expression for the treatment of hypercholesterolemia)

RN 649557-60-8 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-(acetylamino)-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 649557-61-9 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-amino-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

OMe N— (CH₂)
$$_4$$
 — NH— $_{\odot}$

REFERENCE COUNT:

7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2003:42108 CAPLUS Full-text

DOCUMENT NUMBER:

138:106601

TITLE:

Preparation of substituted anilinic piperidines as MCH

selective antagonists

INVENTOR (S):

Marzabadi, Mohammad R.; Wetzel, John; Deleon, John E.;

Jiang, Yu

PATENT ASSIGNEE(S):

Synaptic Pharmaceutical Corporation, USA

SOURCE:

PCT Int. Appl., 771 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PAT | PATENT NO. | | | | | KIND DATE | | | | | | | | | | | | |
|-----|------------|-------|--------------|-----|-----|-----------|------|------|----------------|-------|-------|------|-----|-----|-----|------|-----|--|
| WO | 2003 | 00401 | 27 | | | _ | 2003 | 0116 | | WO 2 | | | | | | 0020 | 702 | |
| | | | | | | | | | | | | | | | | | | |
| | W: | ΑE, | AG, | AL, | AM, | ΑT, | ΑU, | ΑZ, | BA, | BB, | BG, | BR, | BY, | ΒZ, | CA, | CH, | CN, | |
| | | CO, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | |
| | | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | ΚP, | KR, | ΚZ, | LC, | LK, | LR, | |
| | | LS, | LT, | LU, | LV, | ΜA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NO, | NZ, | OM, | PH, | |
| | | PL, | PT, | RO, | RU, | SD, | SE, | SG, | SI; | SK, | SL, | ТJ, | TM, | TN, | TR, | TT, | TZ, | |
| | | UΑ, | ŪĠ, | UZ, | VN, | YU, | ZA, | ZM, | ZW | • | | | | | | | | |
| | RW: | GH, | GM, | KE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AT, | BE, | BG, | |
| | | CH, | CY, | CZ, | DE, | DK, | EE, | ES, | FI, | FR, | GB, | GR, | ΙE, | IT, | LU, | MC, | NL, | |
| | | PT, | SE, | SK, | TR, | BF, | ВJ, | CF, | CG, | CI, | CM, | GΑ, | GN, | GQ, | GW, | ML, | MR, | |
| | | NE, | SN, | TD, | TG | | | | | | | | | | | | | |
| CA | 2454 | 613 | | | A1 | | 2003 | 0116 | (| CA 20 | 002-2 | 2454 | 513 | | 2 | 0020 | 703 | |
| AU | 2002 | 3165 | 31 | | A1 | | 2003 | 0121 | 7 | AU 20 | 002-3 | 3165 | 31 | | 2 | 0020 | 703 | |
| EP | 1411 | 942 | 2 A1 200404: | | | | | 0428 | EP 2002-746843 | | | | | , | 2 | 0020 | 703 | |
| | R: | AT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR, | IT, | LI, | LU, | NL, | SE, | MC, | PT, | |
| | | ΙE, | SI, | LT, | LV, | FI, | RO, | MK, | CY, | AL, | TR, | BG, | CZ, | EE, | SK | | | |

| BR | 2002010869 | Α | 20040629 | BR | 2002-10869 | | 20020703 |
|------------|---------------|-----|-----------|------|--------------|-----------|----------|
| JP | 2004536104 | T | 20041202 | JP | 2003-510038 | | 20020703 |
| НÜ | 200401880 | A2 | 20050128 | HU | 2004-1880 | | 20020703 |
| ZA | 200309860 | A | 20050311 | ZA | 2003-9860 | | 20020703 |
| CN | 1671386 | A | 20050921 | CN | 2002-817212 | | 20020703 |
| NZ | 530221 | A | 20060331 | NZ | 2002-530221 | | 20020703 |
| US | 2004073036 | A1 | 20040415 | US | 2003-345063 | | 20030114 |
| US | 2006041139 | A9 | 20060223 | • | | | |
| us | 7105544 | B2 | 20060912 | | | | • |
| MX | 2003PA11886 | Α | 20050307 | · MX | 2003-PA11886 | | 20031218 |
| NO | 2004000028 | A | 20040304 | NO | 2004-28 | | 20040105 |
| US | 2004186103 | A1 | 20040923 | US | 2004-753057 | | 20040106 |
| US | 2006084649 | A9 | 20060420 | | | | |
| US | 7199135 | B2 | 20070403 | | | | |
| IN | 2004CN00230 | Α | 20051209 | IN | 2004-CN230 | | 20040205 |
| PRIORITY | APPLN. INFO.: | | | US | 2001-899794 | Α | 20010705 |
| | | | | US | 2002-42582 | Α | 20020109 |
| | | | • | US | 2001-303091P | P | 20010705 |
| | | | | US | 2002-346997P | P | 20020109 |
| | | | | US | 2002-188434 | A2 | 20020703 |
| | , | | | WO | 2002-US21063 | W | 20020703 |
| | • | | | US | 2003-345063 | A2 | 20030114 |
| OMITTED CO | TTOTAL (C) | *** | 120 10000 | | | | |

OTHER SOURCE(S):

MARPAT 138:106601

GI

$$R^{1}$$
 R^{1}
 R^{1}
 R^{1}
 R^{1}
 R^{1}
 R^{1}
 R^{1}
 R^{1}
 R^{1}
 R^{2}
 R^{2}

The title compds. [I (R1 = H, alkyl, aryl, etc.; R2 = alkyl, cyclopropyl; R3 = (un)substituted (hetero)aryl; A = H, F, Cl, Br, CN, etc.; X = O, NH; n = 0-5), II (R1 = (un)substituted (hetero)aryl; R2, A, n as above), etc.] which are selective antagonists for melanin concentrating hormone-1 (MCH1) receptors, were prepared and formulated. Thus, reacting 2-methyl-N-[3-(4-piperidinyl)phenyl]propanamide (preparation given) with 4-chloro-3',4'-dimethylbutyrophenone in the presence of K2CO3 and NaI in DMF afforded 80% II [R1 = R1 = 3,4-Me2C6H3; R2 = iso-Pr; A = H; n = 2] which showed Ki of 3.9 nM in cloned rat MCH1 binding assay.

IT 487051-52-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(Uses)

(preparation of substituted anilinic piperidines as MCH selective antagonists)

RN 487051-52-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[(1S)-3-[4-[3-[(2-methyl-1-oxopropyl)amino]phenyl]-1-piperidinyl]-1-phenylpropyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT:

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

3

ACCESSION NUMBER:

2002:539659 CAPLUS Full-text

DOCUMENT NUMBER:

137:109209

TITLE:

Preparation of aryl piperidine derivatives as inducers

of LDL-receptor expression

INVENTOR(S):

Bouillot, Anne Marie Jeanne; Bombrun, Agnes; Dumaitre,

Bernard Andre; Gosmini, Romain Luc Marie

PATENT ASSIGNEE(S):

Glaxo Group Limited, UK

SOURCE:

PCT Int. Appl., 70 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO. | | APPLICATION NO. | DATE | | | |
|------------------------|-----------------|------------------------|---------------|--|--|--|
| | | | | | | |
| WO 2002055497 | A1 20020718 | WO 2001-GB159 | 20010115 | | | |
| W: AE, AG, AL, | AM, AT, AU, AZ, | BA, BB, BG, BR, BY, BZ | , CA, CH, CN, | | | |
| | | EE, ES, FI, GB, GD, GE | | | | |
| | | KG, KP, KR, KZ, LC, LK | | | | |
| | | MW, MX, MZ, NO, NZ, PL | | | | |
| | | TM, TR, TT, TZ, UA, UG | | | | |
| YU, ZA, ZW | | , , , ,, | ,,, | | | |
| RW: GH, GM, KE, | LS, MW, MZ, SD, | SL, SZ, TZ, UG, ZW, AT | , BE, CH, CY, | | | |
| | | IE, IT, LU, MC, NL, PT | | | | |
| | | GW, ML, MR, NE, SN, TD | | | | |
| | | AU 2001-225370 | | | | |
| | | EP 2001-900548 | | | | |
| | | GB, GR, IT, LI, LU, NL | | | | |
| | LV, FI, RO, MK, | | , 52,, 11, | | | |
| | | JP 2002-556169 | 20010115 | | | |
| | | US 2003-250721 | | | | |
| PRIORITY APPLN. INFO.: | | WO 2001-GB159 | | | | |
| OTHER SOURCE(S): | MARPAT 137:1092 | 20010113 | | | | |
| GI | | | | | | |

The title compds. [I; Ar1 = (un)substituted Ph, naphthyl, Ph fused by cycloalkyl; Ar2 = (un)substituted Ph, 5-6 membered heteroaryl; Ar3 = (un)substituted Ph, 5-6 membered heteroaryl; A = CH; E = alkylene; X = CONH, CON(alkyl), NHCO, N(alkyl)CO; Y = a direct link], useful in treating disorders associated with elevated levels of circulating LDL-cholesterol, were prepared and formulated. Thus, amidation of 4-[4-(2-ethoxy-4- ethylphenyl)-piperidin-1-yl]butylamine (preparation given) with 4'-cyanobiphenyl-4-carboxylic acid afforded 30% II which showed IC50 of 10 nM in vitro assay for LDL-r promoter activity.

IT 443130-65-2P 443130-66-3P 443130-67-4P

443130-68-5P 443130-69-6P 443130-70-9P

443130-71-0P 443130-72-1P 443130-73-2P

443130-74-3P 443130-75-4P 443130-76-5P

443130-78-7P 443130-79-8P 443130-80-1P

443130-81-2P 443130-82-3P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aryl piperidine derivs. as inducers of LDL-receptor expression)

RN 443130-65-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-(2-ethoxy-4-methylphenyl)-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 443130-66-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[2-(cyclopropylmethoxy)-4-ethylphenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 443130-67-4 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-chloro-N-[4-[4-(1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-68-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-chloro-N-[4-[4-(2-methoxy-1-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

RN 443130-69-6 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(2-ethoxy-4-ethylphenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-70-9 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-71-0 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[5,6,7,8-tetrahydro-1-(2-methylpropoxy)-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 443130-72-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(2-propenyloxy)-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 443130-73-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-(1-propoxy-2-naphthalenyl)-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 443130-74-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(cyclopropylmethoxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)-(9CI) (CA INDEX NAME)

RN 443130-75-4 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(5,6,7,8-tetrahydro-1-methoxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-76-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-(2-ethoxy-4-ethylphenyl)-1-piperidinyl]butyl]-4'-(methylsulfonyl)- (9CI) (CA INDEX NAME)

RN 443130-78-7 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(4-ethyl-2-hydroxyphenyl)-

1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-79-8 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-80-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-81-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-acetyl-N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-82-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(2-hydroxy-4-methylphenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

IT 443131-29-1P 443131-40-6P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of aryl piperidine derivs. as inducers of LDL-receptor expression)

443131-29-1 CAPLUS RN

[1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[2-[[(1,1-CN dimethylethyl)dimethylsilyl]oxy]-4-ethylphenyl]-1-piperidinyl]butyl]-(CA INDEX NAME)

RN443131-40-6 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[2-[[(1,1dimethylethyl)dimethylsilyl]oxy]-4-methylphenyl]-1-piperidinyl]butyl]-(9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4ANSWER 11 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2002:539658 CAPLUS Full-text

DOCUMENT NUMBER:

137:109294

TITLE:

Preparation of aryl piperidines and piperazines as

inducers of LDL-receptor expression

INVENTOR(S):

Bouillot, Anne Marie Jeanne; Bombrun, Agnes; Dumaitre,

Bernard Andre; Gosmini, Romain Luc Marie

PATENT ASSIGNEE(S):

Glaxosmithkline, UK

SOURCE:

PCT Int. Appl., 115 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT | NO. | · KIND | DATE | APPLICATION NO. | DATE | | | |
|--------------|--------------|--------------|---------------|------------------------|----------------|--|--|--|
| WO 200 | 0 2002055496 | | | WO 2001-GB158 | 20010115 | | | |
| WO 200 | 2055496 | A8 | 20030717 | | | | | |
| ₩: | AE, AG, A | L, AM, A | AT, AU, AZ, | BA, BB, BG, BR, BY, BZ | CA, CH, CN, | | | |
| | | | | EE, ES, FI, GB, GD, GF | | | | |
| | | | | KG, KP, KR, KZ, LC, LE | | | | |
| | | | | MW, MX, MZ, NO, NZ, PI | • | | | |
| | SD, SE, S | G, SI, S | SK, SL, TJ, | TM, TR, TT, TZ, UA, UC | J, US, UZ, VN, | | | |
| | YU, ZA, Z | | | | | | | |
| RW | : GH, GM, K | E, LS, N | MW, MZ, SD, | SL, SZ, TZ, UG, ZW, AM | 1, AZ, BY, KG, | | | |
| | | | | CH, CY, DE, DK, ES, FI | | | | |
| | | | | TR, BF, BJ, CF, CG, C1 | | | | |
| | | | SN, TD, TG | | ,,, | | | |
| AU 200 | | | 20020724 | AU 2001-225369 | 20010115 | | | |
| | | | | EP 2001-900547 | | | | |
| | | | | GB, GR, IT, LI, LU, NI | | | | |
| | | | FI, RO, MK, | | | | | |
| JP 200 | | | | JP 2002-556168 | 20010115 | | | |
| | | | | US 2003-250713 | | | | |
| PRIORITY AP | | | WO 2001-GB158 | | | | | |
| OTHER SOURCE | MARPA | AT 137:10929 | | | | | | |
| GI | | | | · - | | | | |

The title compds. [I; Arl = (un) substituted Ph, naphthyl, Ph fused by cycloalkyl, etc.; Z = a direct link, O, SO2, etc.; A = CR4, N; R4 = H, alkyl, OH, (un) substituted Ph; n = 1-3; o = 1-2; E = alkylene optionally containing 1-2 double bonds or one triple bond and optionally incorporating an O, S, NH, N(alkyl) in the chain; X = a direct link, O, NHCO, etc.; Ar2 = (un) substituted Ph, 5-6 membered heteroaryl, bicyclic heteroaryl; G = H, YAr3; Y = a direct link, O, alkylene, etc.; Ar3 = (un) substituted Ph, naphthyl, Ph fused by cycloalkyl, etc.] and their physiol. acceptable salts, useful in the manufacture of a medicament for the treatment of diseases ameliorated by LDL-r upregulation, were prepared Thus, amidation of 4-[4-(1-methyl-1H-indol-3-yl)piperidin-1-yl] butylamine (preparation given) with 4'-cyanobiphenyl-4-carboxylic acid afforded 33% II which showed IC50 of 10 nM in assay for LDL-r promoting activity.

II

443142-40-3P 443142-46-9P IT

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aryl piperidines and piperazines as inducers of LDLreceptor

expression)

RN 443142-40-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[2,5-dimethyl-4-(2pyridinylmethoxy)phenyl]-1-piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN · 443142-46-9 CAPLUS

[1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[2-(methylthio)phenyl]-1-CN piperidinyl]butyl]-4'-(trifluoromethyl)- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN 2002:539657 CAPLUS Full-text

ACCESSION NUMBER: DOCUMENT NUMBER:

137:109208

TITLE:

Preparation of aryl piperidine derivatives as inducers

of LDL-receptor expression

INVENTOR(S):

Bouillot, Anne Marie Jeanne; Bombrun, Agnes; Dumaitre,

Bernard Andre; Gosmini, Romain Luc Marie

PATENT ASSIGNEE(S):

Glaxosmithkline, UK; Glaxo Group Limited

SOURCE:

PCT Int. Appl., 61 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|-----------|-----------|-----------------|----------|
| | | | | |
| WO 2002055495 | A1 | 20020718 | WO 2001-GB155 | 20010115 |
| WO 2002055495 | A8 | 20030717 | | |
| | | 20050,727 | | |

AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

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CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
             HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
             YU, ZA, ZW
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             KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,
             IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
             GW, ML, MR, NE, SN, TD, TG
     AU 2001225367
                          A1
                                20020724
                                             AU 2001-225367
                                                                     20010115
     EP 1351935
                          A1
                                20031015
                                             EP 2001-900545
                                                                     20010115
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     JP 2004520346
                          Т
                                20040708
                                             JP 2002-556167
                                                                     20010115
     US 2004072865
                          A1
                                20040415
                                             US 2003-250711
                                                                     20031020
PRIORITY APPLN. INFO.:
                                             WO 2001-GB155
                                                                    20010115
OTHER SOURCE(S):
                         MARPAT 137:109208
GI
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The title compds. [I; Arl = (un) substituted Ph, naphthyl, Ph fused by cycloalkyl; Ar2 = (un) substituted Ph, 5-6 membered heteroaryl; Ar3 = (un) substituted Ph, 5-6 membered heteroaryl; A = CH; E = alkylene; X = CONH, CON(alkyl), NHCO, N(alkyl)CO; Y = a direct link, NHCO, N(alkyl)CO, CONH, CON(alkyl)], useful in treating disorders associated with elevated circulating levels of LDL-cholesterol, were prepared and formulated. Thus, reacting 5-methyl-2-(pyridin-4-yl)phenol with 4-(4-chlorobenzoylamino)-N- (4-oxobutyl)benzamide (prepns. given) in the presence of NaBH(OAc)3 in THF and MeOH afforded 76% II.HCl which showed IC50 of 30 nM in vitro assay for LDL-r promoter activity.

IT 443130-78-7P 443130-79-8P 443130-80-1P 443130-82-3P 443150-51-4P

RN

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of aryl piperidines as inducers of LDL-receptor expression) 443130-78-7 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(4-ethyl-2-hydroxyphenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-79-8 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-80-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443130-82-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-(2-hydroxy-4-methylphenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443150-51-4 CAPLUS

CN Phosphoric acid, 2-[1-[4-[[(4'-cyano[1,1'-biphenyl]-4-yl)carbonyl]amino]butyl]-4-piperidinyl]-5-methylphenyl diethyl ester (9CI) (CA INDEX NAME)

IT 443130-81-2P 443150-44-5P 443150-47-8P 443150-50-3P 443150-52-5P 443150-53-6P

443150-54-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aryl piperidines as inducers of LDL-receptor expression)

RN 443130-81-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-acetyl-N-[4-[4-(5,6,7,8-tetrahydro-1-hydroxy-2-naphthalenyl)-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443150-44-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[2-(acetyloxy)-4-ethylphenyl]-1-piperidinyl]butyl]-4'-cyano- (9CI) (CA INDEX NAME)

RN 443150-47-8 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(acetyloxy)-5,6,7,8-tetrahydro-2-naphthalenyl]-1-piperidinyl]butyl]-4'-cyano- (9CI) (CA INDEX NAME)

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[1-(acetyloxy)-2-naphthalenyl]-1-piperidinyl]butyl]-4'-cyano- (9CI) (CA INDEX NAME)

RN 443150-52-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[4-methyl-2-(phosphonooxy)phenyl]-1-piperidinyl]butyl]- (9CI) (CA INDEX NAME)

RN 443150-53-6 CAPLUS

CN Phosphoric acid, 2-[1-[4-[[(4'-cyano[1,1'-biphenyl]-4-yl)carbonyl]amino]butyl]-4-piperidinyl]-5,6,7,8-tetrahydro-1-naphthalenyl diethyl ester (9CI) (CA INDEX NAME)

RN 443150-54-7 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[4-[4-[2-(acetyloxy)-4-methylphenyl]-1-piperidinyl]butyl]-4'-cyano- (9CI) (CA INDEX NAME)

IT 443131-29-1P 443131-40-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of aryl piperidines as inducers of LDL-receptor expression)

RN 443131-29-1 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[2-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-4-ethylphenyl]-1-piperidinyl]butyl]-(9CI) (CA INDEX NAME)

RN 443131-40-6 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, 4'-cyano-N-[4-[4-[2-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-4-methylphenyl]-1-piperidinyl]butyl](9CI) (CA INDEX NAME)

REFERENCE COUNT: 8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2001:228703 CAPLUS Full-text

DOCUMENT NUMBER:

134:252267

TITLE:

Preparation of diarylalakanediamine derivatives as

INVENTOR(S):

melanin concentrating hormone (MCH) antagonists Kato, Kaneyoshi; Mori, Masaaki; Suzuki, Nobuhiro; Shimomura, Yukio; Takekawa, Shiro; Choh, Nobuo

PATENT ASSIGNEE(S):

Takeda Chemical Industries, Ltd., Japan

SOURCE:

PCT Int. Appl., 284 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

DANGORGE.

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. WO 2001021169 **A1** 20010329 WO 2000-JP6376 20000919 W: AE, AG, AL, AM, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CR, CU, CZ, DM, DZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,

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CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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                          A1
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                                                                    20000919
     AU 2000073158
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                                                                    20000919
     JP 2002097138
                          Α
                                20020402
                                            JP 2000-288894
                                                                    20000919
                                20020703
     EP 1219294
                          Α1
                                            EP 2000-961076
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             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL
PRIORITY APPLN. INFO.:
                                             JP 1999-266278.
                                                                 A 19990920
                                            JP 2000-221055
                                                                 Α
                                                                    20000717
                                             WO 2000-JP6376
                                                                 W
                                                                    20000919
OTHER SOURCE(S):
                         MARPAT 134:252267
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$$Ar^{1} \stackrel{P-N}{\stackrel{|}{\stackrel{|}{\sim}}} \stackrel{R^{1}}{\stackrel{|}{\sim}} \stackrel{R^{2}}{\stackrel{|}{\sim}} \stackrel{R^{3}}{\stackrel{|}{\sim}} \stackrel{R^{3}}{\stackrel{|}{\sim}}$$

GI

Compds. of general formula [I; wherein Arl and Ar2 are each an optionally AB substituted aromatic group; P and Q are each a divalent aliphatic hydrocarbon group which may contain ethereal oxygen or sulfur in the carbon chain and may be substituted; R1 and R3 are each (i) hydrogen, (ii) acyl, or (iii) optionally substituted hydrocarbyl; R2 and R4 are each (i) hydrogen, (ii) optionally substituted alkyl, or (iii) optionally substituted alkylcarbonyl; alternatively R1 and R2 or R3 and R4 together with the nitrogen atom adjacent thereto may form a monocyclic or fused nitrogenous heterocyclic group; and j is 0 or 1], salts of the same, or prodrugs thereof are prepared These compds. are useful for the treatment of diseases caused by MCH, e.g. obesity (as antiobesity agents) or overeating (as appetite depressants), or for the improvement of emotional disorders or sexual function. Thus, benzyl 2-[(5hydroxy-2,2-diphenylpentyl)amino]-2- oxoethylcarbamate was brominated by Br and Ph3P in MeCN at room temperature for 1 h to give benzyl 2-[(5-bromo-2,2diphenylpentyl)amino]-2- oxoethylcarbamate which was dissolved in MeCN, treated with 4-phenylpiperidine and K2CO3 in MeCN, and stirred at 40° overnight to give, after purification on alumina column chromatog, and conversion into the HCl, benzyl 2-[[2,2-diphenyl-5-(4phenylpiperidino)pentyl]amino]-2- oxoethylcarbamate hydrochloride (II). II in vitro inhibited the binding of [35S]-guanosine $5'-(\gamma-thio)$ triphosphate to human somatostatin-like receptor (SLC-1) with IC50 of 5 nM. Tablet formulations containing II were described. .

IT 331629-33-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of diarylalakanediamine derivs. as melanin concentrating hormone (MCH)

antagonists for treating MCH-caused diseases)

RN 331629-33-5 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[2,2-diphenyl-5-(4-phenyl-1-piperidinyl)pentyl]- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 12 THERÈ ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1999:594935 CAPLUS Full-text

DOCUMENT NUMBER:

131:228652

TITLE:

Preparation of substituted piperidines for pharmaceutical use as opioid antagonists

INVENTOR(S): Carroll, Frank Ivy

PATENT ASSIGNEE(S):

USA

SOURCE:

PCT Int. Appl., 171 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| | | | | | | | APPLICATION NO. | | | | | | | | | | | |
|------|-----|------|------|------|-----|-----|-----------------|------|------|-----|----|------|----------|-----|-----|------|-------|-----|
| | · | | | | | | WO 1999-US5131 | | | | | | 19990309 | | | | | |
| | | W: | AL, | AM, | ΑT, | AU, | ΑZ, | BA, | BB, | BG, | BR | , BY | , CA, | CH, | CN, | CU | , cz, | DE, |
| | | | | | | | | | | | | | , HU, | | | | | |
| | | | KE, | KG, | ΚP, | KR, | KZ, | LC, | LK, | LR, | LS | , LT | , LU, | LV, | MD, | MG | MK, | MN, |
| | | | | | | | | | | | | | , SG, | | | | | |
| | | | TR, | TT, | UA, | UG, | US, | UZ, | VN, | ΥU, | ZW | , AM | , AZ, | BY, | KG, | KZ, | , MD, | RU, |
| | | | TJ, | TM | | | | | | | | | | | | | | |
| | | RW: | GH, | GM, | KE, | LS, | MW, | SD, | SL, | SZ, | ŪΘ | , ZW | , AT, | BE, | CH, | CY | DE, | DK, |
| | | | ES, | FI, | FR, | GB, | GR, | ΙE, | IT, | LU, | MC | , NL | , PT, | SE, | BF, | BJ, | CF, | CG, |
| | | | | | | | | | | | | , TD | | • | | | | |
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| | ΑU | 9930 | 738 | | | Α | | 1999 | 0927 | | ΑU | 1999 | -3073 | 8 | | : | 19990 | 309 |
| | | 7569 | | | | B2 | | 2003 | | | | | | | | | | |
| | EP | 1061 | | | | | | | | | | | -9123 | | | | | |
| | | R: | ΑT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR | , IT | , LI, | LU, | NL, | SE, | MC, | PT, |
| | | | ΙE, | , | | | | | | | | | | | | | | |
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| | EP | 1512 | | | | | | | | | | | -1008 | | | | L9990 | |
| | | R: | ΑT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR | , IT | , LI, | LU, | NL, | SE | MC, | PT, |
| | | | ΙE, | FI, | CY | | | | | • | | | | | | | | |
| | | 6900 | | | | В1 | | 2005 | 0531 | | | | -6238 | | | | L9990 | 309 |
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| | | 6552 | | | | B2 | | 2003 | 0422 | | | - | | | | | | |
| | | 2002 | | | | | | 2002 | | | US | 2002 | -1000 | 96 | | 2 | 20020 | 319 |
| | | 6593 | | | | B2 | | 2003 | | | | | | | | | | |
| | US | 2002 | 1936 | 02 | | A1 | | 2002 | | | US | 2002 | -9994 | 8 | | 2 | 20020 | 319 |
| | US | 6531 | 481 | | | B2 | | 2003 | | | | | | | | | | |
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| | | 2004 | | | | A1 | | 2004 | 0729 | | | | -7427 | | | | 20031 | |
| PRIO | RIT | APP | LN. | INFO | . : | | | • | | | | | -7740 | | | | | |
| | | | | | | | | | • | | | | -1079 | | | | | |
| | | | | | | | | | | | EP | 1999 | -9123 | 45 | | A3 : | 19990 | 309 |
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A3 20001127 A1 20020319

OTHER SOURCE(S):

MARPAT 131:228652

GT

CN

STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Piperidine contg. heterocyclic compds. I [R1, R2 = H, alkyl, aryl, arylalkyl; R3 = alkyl, cycloalkyl, aryl, arylalkyl, etc.], II [R1 = alkyl, arylalkyl; R3, R4, R5, R6 = H, OH, NH2, CN, CF3, CN, NO2, alkyl, alkyloxy, halogen, amino, etc.; R7 = H, alkyl], and III [R1 = alkyl, arylalkyl; R2 = H, NH2, :O, alkyl, arylalkyl, amino, etc.] were prepared for use as opioid antagonists to treat a variety of disease states which involve the opioid receptors. Thus, the hydrochloride salt of piperidine IV [R3 = (CH2)2C6H4-4-OH], i.e. RTI 5989-29, was prepared starting from (+)-(3R,4R)-dimethyl-4-(3-hydroxyphenyl)piperidine, N-(tert- butoxycarbonyl)-L-valine, and 3-(4-hydroxyphenyl) propanoic acid. The prepared heterocyclic compds. containing a piperidine subunit were tested for κ -, μ -, and δ -opioid receptor binding activity.

IT 220122-95-2P 244048-85-9P

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of heterocyclic compds. containing a piperidine subunit for pharmaceutical use as opioid antagonists)

RN 220122-95-2 CAPLUS

> [1,1'-Biphenyl]-4-carboxamide, N-[2-[(3R,4R)-4-(3-hydroxyphenyl)-3,4dimethyl-1-piperidinyl]ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 244048-85-9 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[(1S)-2-[(3R,4R)-4-(3-hydroxyphenyl)-3,4dimethyl-1-piperidinyl]-1-methylethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 1998:749847 CAPLUS Full-text

DOCUMENT NUMBER:

130:139233

TITLE:

Identification of an Opioid κ Receptor Subtype-Selective N-Substituent for

AUTHOR (S):

(+)-(3R,4R)-Dimethyl-4-(3-hydroxyphenyl)piperidine Thomas, James B.; Fall, Michael J.; Cooper, Julie B.; Rothman, Richard B.; Mascarella, S. Wayne; Xu, Heng; Partilla, John S.; Dersch, Christina M.; McCullough, Karen B.; Cantrell, Buddy E.; Zimmerman, Dennis M.;

Carroll, F. Ivy

CORPORATE SOURCE:

Chemistry and Life Sciences Research Triangle Institute, Research Triangle Park, NC, 27709, USA Journal of Medicinal Chemistry (1998), 41(26),

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5188-5197

CODEN: JMCMAR; ISSN: 0022-2623

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AB A three-component library of compds. was prepd. in parallel using multiple simultaneous solution-phase synthetic methodol. The compds. were biased toward opioid receptor antagonist activity by incorporating (+)-(3R,4R)dimethyl-4-(3-hydroxyphenyl)piperidine (a potent, nonselective opioid pure antagonist) as one of the monomers. The other two monomers were N-substituted or unsubstituted Boc-protected amino acids and a range of substituted aryl carboxylic acids and were selected to add chemical diversity. Screening of these compds. in competitive binding expts. with the κ opioid receptor selective ligand [3H]U69,593 led to the discovery of a novel κ opioid receptor selective ligand, RTI-5989-29 (I). Addnl. structure-activity relationship studies suggested that I possesses lipophilic and hydrogen-bonding sites that are important to its opioid receptor potency and selectivity. These sites appear to exist predominantly within the κ receptor since the selectivity arises from a 530-fold loss of affinity of I for the µ receptor and an 18-fold increase in affinity for the κ receptor relative to the μ-selective liqund, (+) -N-[trans-4-phenyl-2-butenyl] - (3R,4R) -dimethyl-4- (3hydroxyphenyl)piperidine. The degree of selectivity observed in the radioligand binding expts. was not observed in the functional assay. According

to its ability to inhibit agonist stimulated binding of [35S]GTP γ S at all three opioid receptors, I behaves as a μ/κ opioid receptor pure antagonist with negligible affinity for the δ receptor.

IT 220122-95-2P 220125-21-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation of an opioid antagonist combinatorial library of acylaminoethylpiperidinylphenols)

RN 220122-95-2 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[2-[(3R,4R)-4-(3-hydroxyphenyl)-3,4-dimethyl-1-piperidinyl]ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 220125-21-3 CAPLUS

CN [1,1'-Biphenyl]-4-carboxamide, N-[(1S)-2-[(3R,4R)-4-(3-hydroxyphenyl)-3,4-dimethyl-1-piperidinyl]-1-methylethyl]-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT:

THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT